ABSTRACT OF THE INVENTION

A router includes a routing layer and a switching layer.
The routing layer includes a plurality of I/O ports for
5   exchanging data with components external to the router.
The switching layer is adapted to switch data packets
between I/O ports of the routing layer. The switching
layer includes an array of cells in communication with
the routing layer for permitting exchange of data packets
10   between the array of cells and the routing layer. Each
cell includes a memory for receiving a data packet from
the routing layer. The routing layer includes a
controller to control release of a data packet toward a
cell of the array at least in part on a basis of a degree
15   of occupancy of the memory in the cell.